

## **SOP 11 - Hoods**

### **A. Protection Afforded by Hoods**

1. Hood ventilation prevents toxic, offensive, flammable, or hazardous vapors from entering the laboratory atmosphere.
2. Hood sash protects personnel from splashes or minor explosions and fires which occur inside the hood.
3. Hood offers preliminary containment of spills which occur therein.

### **B. General Hood Procedures**

1. Keep the sash down when not performing operations in the hood.
2. Keep the exhaust fan on when potentially harmful materials or experiments are in the hood.
3. Processes or equipment located in the rear of the hood will achieve better ventilation than those located in the front of the hood.
4. Do not use hoods as storage for chemicals.
5. As a rule of thumb, hoods, or other local ventilation devices, should be used when the experiment or process involves a volatile chemical with a threshold limit value of less than 50 parts per million.

### **C. Maintaining Proper Air Flow**

1. The fume hoods at SNARC and DB NRRC operate on two different principles:
  - a. SNARC: The fume hoods achieve a design face velocity of 100 feet per minute with their sashes fully open.
  - b. DB NRRC: The fume hoods have an energy conservation feature and only achieve a design face velocity of 100 feet per minute with their sashes approximately half open. The proper sash height is indicated by a sticker on the hood. For operations with toxic or dangerous materials, the scientist or technician should contact Cletus Patterson to increase the airflow in the fume hood.
2. Processes or equipment should not be located close to exhaust vents, the sides, or the front of the hood.
3. Processes or equipment should be placed on stands so that at least one inch of air space is between them and the counter top of the hood.
4. Materials placed or stored in front of a hood sash will adversely affect airflow into the hood.
5. Solid objects (e.g., paper) should not be allowed to enter the exhaust ducts of hoods.

### **D. Hood Inspection**

1. Hoods must be inspected at least annually for proper airflow patterns and volume.
2. Hoods should be inspected in accordance with the procedures found in ARS Manual 230.
3. After passing inspection, a sticker should be affixed to the hood identifying that:
  - a. The hood has passed inspection.
  - b. The date of the inspection.
  - c. The initials or name of the inspector.